	Application No.	Applicant(s)
Notice of Allowability	10/826,704	HAMALAINEN ET AL.
	Examiner	Art Unit	
	Christina Russell	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.

2. ☒ The allowed claim(s) is/are *1-25*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date *7/04*

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

SUPER   ER TECH

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with James Retter on November 30, 2005.

The application has been amended as follows:

In claim 9, line 2, change ""DLS"" to - - Downloadable Sounds Level (DLS) - -.

In claim 11, line 2, change "" MIV "" to - - Maximum Instantaneous (number of)

Voices (MIV) - - .

In claim 13, line 2, change "" DLS1 "" to - - Downloadable Sounds Level 1 (DLS1)

- - .

In claim 14, line 2, change "" DLS2 "" to - - Downloadable Sounds Level 2 (DLS2)

- - .

In claim 15, line 2, change "" MIDI "" to - - Musical Instrument Digital Interface

(MIDI) - - .

The following paragraph shall be inserted on page 18 of the specification, directly before line 16:

- - Fig. 3 shows a representation of voice information used by and computed by a synthesizer/ MIDI device operative according to the invention, and in particular such information in case of a synthesizer/ MIDI device not having a dynamic voice architecture. - -

The paragraph currently beginning at line 16 of page 18 of the specification shall be changed as follows:

- - Referring now to Fig. 4, a comparison is shown of the masking required by SP-MIDI or, equivalently, the invention in case of constant complexity voices, and the masking required in case of being able to take into account different complexity for different voices. Fig. 4 compares the use of resources--as indicated by the number of voices two different synthesizers/ MIDI devices must be able to produce, called here a total voice requirement, to play music in a music file according to different indicated priorities--by a synthesizer/ MIDI device having the voice information indicated in Fig. 2 (illustrating operation in case of a dynamic voice architecture) and a synthesizer/ MIDI device having the voice information indicated in Fig. 3 (indicating a voice architecture using the same resources for all kinds of voices). - -

DETAILED ACTION

2.   The following is an examiner's statement of reasons for allowance:

3.   The US patents to Fay (6,806,412), Stier et al. (5,138,926), and Matsuda

(5,380,949), and the US patent application publication to Holm et al. (US

2004/0159219) fail to teach all the claimed elements of independent claims 1, 7, 21, 22,

and 23.

4.   In terms of claim 1, Fay teaches the allocation or distinguishing of channels to

different musical tones or instruments, while regarding the available resources of the

device (see column 2, lines 4- 67, and column 3, line 50 – column 4, line 45), but does

not teach channel masking or the selection of channels in order of priority, or the

capability to mute certain channels. The determining of channel assignments, according

to Fay's invention, is done by instruction. Holm et al. teaches a method for playing

music and generating tones by increasing polyphony, or increasing the number of

voices by combining the power and resources of two or more sources (see page 1,

paragraph [0010] – page 2, paragraph [0013]), but again does not discuss prioritizing

channels or muting ability. Stier et al. teaches the ability to modify the inputted voices or

channels and Matsuda teaches the ability to halt certain channels and reassign them

with a different tone or voice depending on the priority level of that channel and that key

tone but does not teach the ability to just mute the channel without deleting the tone that

exists there. Therefore claim 1, and its dependent claims are allowable.

5.   In terms of claim 7, and its dependent claims, similar to claim 1, are allowable because the combination of prioritizing channels, muting certain channels based on resource availability, a music player with processing capabilities to organize the ranking of channels and tones, the calculation of required and available resource consumption, the ability to control and adjust the playback of the prioritized tones and the prediction of processing requirements in order to categorize the voices assigned to the specified channels could not be found. Parts of theses claimed elements can be found in the above references, such as channel selection by priority and the limitation by available resources.

6.   In terms of claim 21 and 22, similar to the above mentioned claims, are allowable because the above mentioned references lack certain parts of the claimed elements, especially the ability to calculate the consumption of resources and use those calculations to properly prioritize the musical tones assigned to channels in order to playback and control the musical tones produced. The devices, systems and methods taught by Fay, Matsuda, Holm et al. and Stier et al. can not process and calculate the device specific requirements and information.

7.   Lastly, in terms of claim 23, similar to claim 1, neither Fay, Matsuda, Holm et al. and Stier et al. teach, in particular, the categorization of the assigned and prioritized music or voices and the adjusting of said voices based on resource consumption required by the device. Therefore claim 23 and its dependent claims are allowable.